

Commodity Highlight: Eggplant

Eggplant (*Solanum melongena* L) is a native of India and Pakistan and is thought to have originally been introduced into North America by Thomas Jefferson in his garden at Monticello. A member of the nightshade (*Solanaceae*) family, eggplant is related to potatoes, tomatoes, and bell peppers. Eggplant is a warm-season crop (sensitive to cool temperatures), which is grown primarily from transplants in the United States to reduce the growing period by about half (direct-seeded crops require as long as 150 days to mature). Eggplant (also known as aubergine in some parts of the world) reportedly received its name in the past when white, egg-shaped varieties were more common.

Eggplant is available in a variety of colors (e.g., purplish black, red, white, and variegated) and shapes (e.g., egg-shaped, elongated, and round). Several varieties are produced in the United States, including the traditional Black Beauty and Black Bell, which tend to be oblong or globular in shape. Also found in well-stocked produce departments are the less commonly produced Asian varieties (which tend to be long and slender) and baby (or miniature) eggplant.

World production of eggplant is highly concentrated, with 93 percent of output coming from seven countries. China (55 percent of world output) and India (28 percent) are the top producers, with the United States a distant 20th. Egypt, Turkey, and Japan round out the top five producing nations. More than 4 million acres are devoted to the cultivation of eggplant in the world.

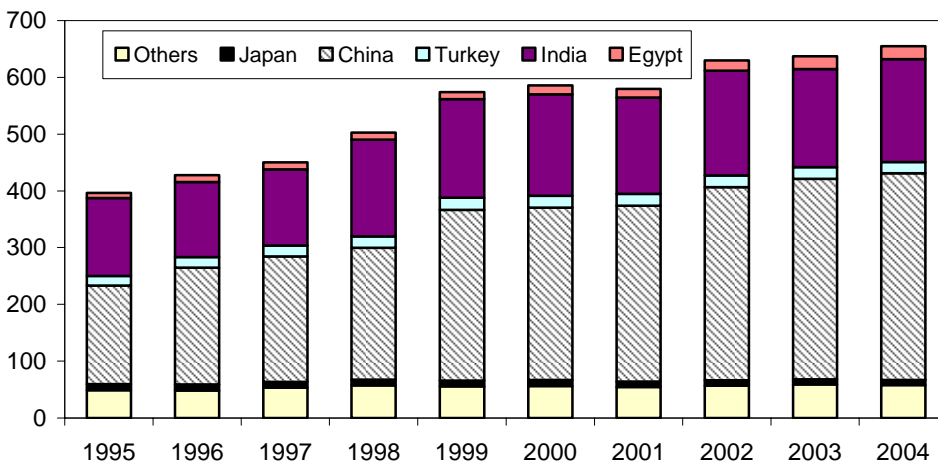
Eggplant Is Widely Grown

Eggplant is a widely grown specialty vegetable in the United States, although there are less than 7,000 acres devoted to production annually. In the 2002 Census of Agriculture, 47 States reported harvesting eggplant, with the top five States accounting for 78 percent of the acreage. About 4 percent of the 54,000 farms that harvest vegetables (excluding potatoes and pulses) in the United States reported harvesting eggplant. About 98 percent of the eggplant grown in the United States is produced for the fresh market, with the remainder used for processed products such as frozen entrees and specialty dips and appetizers.

Figure 10

Eggplant: World production, 1995-2004

Mil. cwt

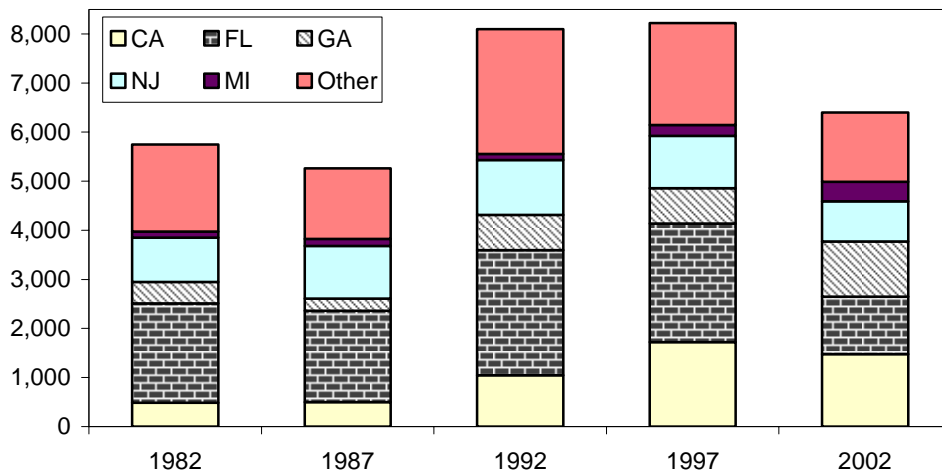


Source: United Nations, Food and Agriculture Organization, FAOStat (11/2006).

Figure 11

U.S. eggplant: Acres harvested, census years, 1982-2002

Acres



Source: USDA, National Agricultural Statistics Service, Census of Agriculture.

USDA has not collected complete domestic production statistics for eggplant since 2001. In 2001, nine States reported the production of eggplant with Georgia, Florida, California, New Jersey, and New York the top five producers. If Michigan had been included in the 2001 estimates program for eggplant, it would have supplanted New York as the fifth-largest producer. In 2005, California, New Jersey, New York, Michigan, and Hawaii reported production statistics for eggplant through their State vegetable estimates programs. Although acreage and production data are not reported for Georgia and Florida, information on market shipments are reported for these States by USDA's Market News Service. Shipments data indicate that along with California, Georgia, and Florida remain among the top three eggplant-producing States today.

According to Market News data, Georgia was the leading shipper of fresh-market eggplant in 2005. Georgia's eggplant acreage increased from 719 acres in 1997 to over 1,100 acres in 2002. Only 44 farms reported producing eggplant in the 2002 census, down from 64 in 1997. The major producing counties are Colquitt (43 percent of area), Echols (21 percent), and Lowndes (13 percent). Between May and December, Georgia ships fresh-market eggplant monthly (except for August), with volume peaking in June and again in October.

In California, about 90 percent of eggplant is produced in Fresno and Riverside counties, with Fresno accounting for about three-fourths of the crop. According to the California County Agricultural Commissioners Report, the farm value of the 2005 California eggplant crop was nearly \$12 million—up from about \$9 million 5 years earlier. In 2005, production came from 1,364 acres and totaled about 39 million pounds. California generally ships eggplant from late April to early December, with peak shipments occurring in early fall.

In Florida, eggplant acreage is spread among 23 counties but the crop is primarily produced in the southeastern part of the State. In 2002, about 25 percent of Florida's harvested acreage was in Palm Beach County, with Hillsborough and Miami-Dade counties also important. Florida's eggplant acreage has declined and is less than half of what it was in 1997 due to a combination of increasing per-acre yields (requiring less acreage to maintain production) and a shift of some acreage to Georgia. In 2002, Florida reported 1,174 acres of eggplant—down from 2,416

Table 18--California eggplant, all uses: Area, production, and value

Year	Acres		Yield per acre	Production	Average price 1/	Crop value
	Planted	Harvested				
	Acres		Cwt	1,000 cwt	\$/cwt	\$ 1,000
1980	--	370	144	53	31.00	1,653
1985	--	394	192	76	24.00	1,506
1990	--	612	223	113	25.25	3,832
1995	--	840	331	277	32.50	9,032
2000	1,600	1,600	205	328	27.50	9,020
2001	1,400	1,400	235	329	24.50	8,061
2002	--	949	225	213	29.10	6,202
2003	--	997	241	241	29.00	6,979
2004	--	1,041	285	297	27.65	8,202
2005	--	1,364	289	395	29.63	11,697

-- = not available. Cwt = hundredweight, a unit of measure equal to 100 pounds.

1/ Season-average farm price.

Sources: California County Agricultural Commissioner reports (1980-99 and 2002-05) and USDA, National Agricultural Statistics Service, *Vegetables Summary* (2000-01).

acres in 1997. In 2005, USDA's Market News Service reported that shipments of eggplant from Florida totaled about 35 million pounds, down from 48 million pounds in 1997. Florida ships eggplant monthly from October to June with volume peaking during the spring.

In 2005, New Jersey harvested 800 acres of eggplant, with a farm value of nearly \$4 million. The State's eggplant is largely produced in Gloucester (31 percent), Cumberland (20 percent), and Atlantic (14 percent) counties. Eggplant acreage has trended lower in New Jersey, dropping 20 percent over the past decade. However, production has largely been maintained as per-acre yields have risen. New Jersey ships eggplant from mid-July to early October, when frost ends the season.

The United States Is World's Leading Importer

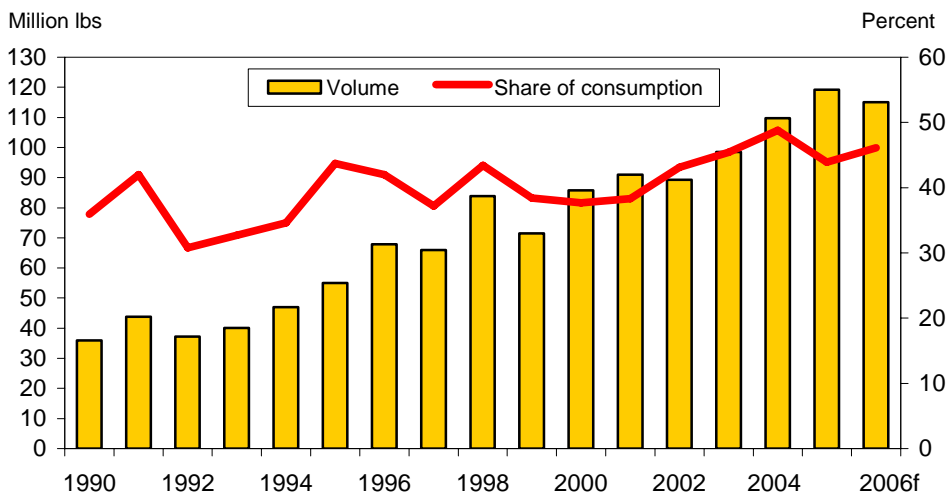
Despite a per-capita consumption rate of less than 1 pound, the United States is the leading importer of eggplant in the world. According to the Food and Agriculture Organization of the United Nations, during 2002-04, the United States accounted for 19 percent of world eggplant import volume. France, Syria, Germany, and Canada round out the top five eggplant importers. The top five nations account for two-thirds of all eggplant imports.

The volume of U.S. eggplant imports has jumped 130 percent between 1993-95 and 2003-05. During 2003-05, imports averaged about 46 percent of U.S. domestic eggplant use—up from 37 percent a decade earlier. Mexico accounted for 80 percent of 2005 eggplant import volume followed by Honduras with 17 percent. Over the past decade, Honduran exporters have been chipping away at Mexico's dominance in this market. A decade earlier, Mexico held most of the eggplant import market with Honduras accounting for just 3 percent of volume.

Most U.S. eggplant imports, which were valued at \$46 million in 2005, enter during the cooler months of the year. However, import volume has begun to expand throughout the year. The winter season (January-March) accounted for 46 percent of eggplant imports during the last three years (2003-05)—up from 55 percent a decade earlier (1993-95). Florida is the only domestic shipper during the winter.

Figure 12

U.S. eggplant imports: Volume and share of consumption, 1990-2006



f = ERS forecast.

Source: Derived by ERS from data of U.S. Dept. of Commerce, U.S. Census Bureau.

The fall (October-December) season, which is served by several States, accounted for 31 percent of import volume in 2003-05, up from 25 percent in 1993-95. The share of eggplant imports entering during the spring (April-June) remains around one-fifth, while 5 percent of volume comes in during the summer months—up from 1 percent a decade ago.

On the export side of the eggplant market, the top five nations account for three-fourths of world eggplant export volume. Spain, Mexico, and Jordan are the leading eggplant export nations, with the United States a distant seventh. As with most U.S. fresh vegetables, the majority of U.S. exports is shipped to Canada (99 percent), with most of the remainder moving to Mexico. U.S. eggplant exports, which were valued at nearly \$9 million in 2005, are distributed throughout the year, with slightly more volume during the spring and fall and less volume during the winter months. About 9 percent of U.S. eggplant supplies were exported annually during 2003-05—down from 13 percent a decade earlier.

U.S. Eggplant Consumption Is Rising

U.S. eggplant consumption has trended higher over the past 5 decades. ERS estimates indicate that per-capita domestic disappearance (consumption) of eggplant averaged:

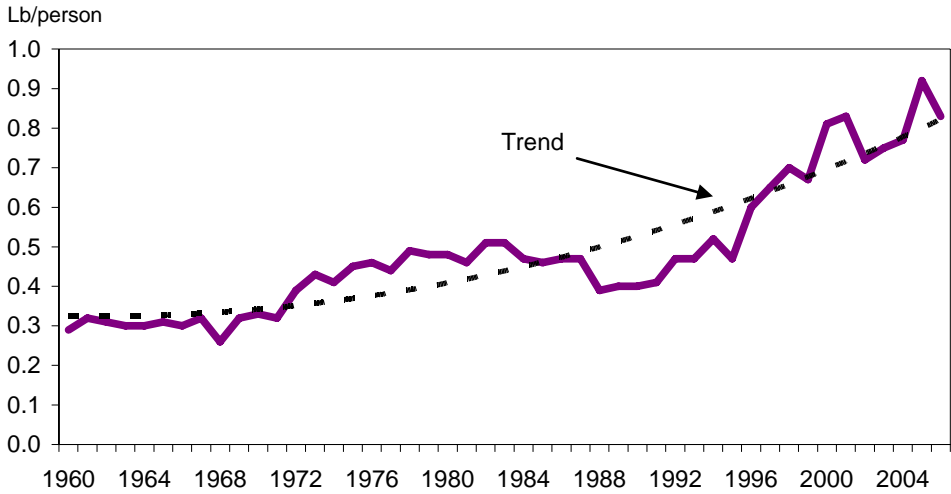
- o 0.30 pound in the 1960s;
- o 0.42 pound in the 1970s;
- o 0.46 pound during the 1980s;
- o 0.54 pound during the 1990s; and
- o 0.80 pound over the 2000-05 period.

Between 1993-95 and 2003-05, per-capita use of eggplant rose by two-thirds to 0.8 pound. Domestic disappearance averaged 238 million pounds during 2003-05 compared with 128 million pounds in 1993-95. The more rapid growth which has been apparent over the past decade may reflect the introduction of new processed products plus increased interest in following a vegetarian or vegan diet. According to a Harris Interactive poll conducted for the Vegetarian Resource Group, 7 percent of Americans 18 years or older never eat meat, while about 2 percent considered

themselves vegetarians in 2006. A decade earlier, about 1 percent of Americans considered themselves vegetarians. 1/

Eggplant can be prepared in many ways including fried, broiled, grilled, micro-waved, baked, stewed, pureed, breaded, and pickled. In addition to serving as a meat substitute in dishes such as Eggplant Parmesan, eggplant is used in traditional ethnic dishes such as moussaka and ratatouille and in appetizers such as baba ghanoush (dip) and various pureed eggplant spreads. Eggplant, which contains about 30 calories per cup, is a good source of several vitamins (including A and C) and potassium. Increases in both domestic production (up 51 percent) and import volume (up 130 percent) have each played key roles in supporting increased U.S. eggplant demand over the past decade.

Figure 13
U.S. eggplant: Per capita use, 1960-2006



Source: Computed and prepared by USDA, Economic Research Service.

Table 19--U.S. eggplant, all uses: Estimated supply, disappearance, and price

Year	Supply			Utilization			Season-ave. price	
	Production 1/	Imports 2/	Total	Exports 2/	Domestic	Per capita use	Current dollars 3/	Constant dollars 4/
-- Million pounds --						Pounds	-- \$/cwt --	
1985	77.2	32.0	109.2	--	109.2	0.46	13.03	18.69
1990	79.0	35.9	114.9	15.0	99.9	0.40	25.82	31.65
2000	165.4	85.8	251.2	23.3	227.9	0.81	26.00	26.00
2001	169.4	91.0	260.4	22.9	237.5	0.83	25.10	24.51
2002	140.8	89.3	230.1	22.9	207.2	0.72	29.10	27.93
2003	141.8	98.5	240.3	23.4	216.9	0.75	29.00	27.28
2004	136.2	109.7	245.9	21.1	224.8	0.77	27.65	25.35
2005	173.8	119.2	293.0	21.2	271.8	0.92	29.63	26.43
2006 f	156.1	115.0	271.1	21.9	249.2	0.83	--	--

-- = Not available. f = ERS forecast. 1/ Estimated by ERS from both state and census data except 2000-01 from USDA, NASS published data. 2/ Source is U.S. Census Bureau, USDC. 3/ Except for 1985-2002 from NASS, prices are from California as reported by the California County Agricultural Commissioners. 4/ Constant dollar prices are calculated using the GDP deflator, 2000=100.

Source: Compiled and computed by USDA, Economic Research Service.

1/ Stahler, Charles. "How Many Adults Are Vegetarian?" *Vegetarian Journal*. Issue 4, 2006. The Vegetarian Resource Group.

For more information on eggplant, refer to the Vegetables and Melons Situation and Outlook Yearbook at:

<http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1212>